Kavisha Ghodasara

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MSCS student specializing in software engineering, algorithms, and AI/ML, proficient in Python, Java, C++, JavaScript. Experienced in full-stack development, distributed/parallel systems, cloud platforms, and deploying scalable, high-performance applications.

EDUCATION

University of Massachusetts Amherst *Expected: Dec '26*
M.S., Computer Science GPA: (4.00/4.00)
Courses: Artificial Intelligence, Machine Learning, Algos for Data Science, Neural Networks, Theory & Practice of Software Engg

Savitribai Phule Pune University *Graduated: May '22*
B.E., Computer Science with Honors in Data Science CGPA: (9.69/10.0)

WORK EXPERIENCE

Data Science and ML intern — Caliber Infosolutions Inc. *Jun '25 - Present*

- Built pharmaceutical instrument scheduling optimizer using **MILP (PuLP/CBC)** with expertise-based assignments; reduced scheduling time by optimizing **100+** daily tasks across **15-day** horizons with regulatory compliance constraints.
- Engineered parallel processing pipeline for **10,000+** records with multi-worker architecture; reduced processing time **by 93%** and demonstrated **3-5x** solver performance improvements through comprehensive benchmarking.
- Architected hierarchical constraint validation engine with real-time conflict resolution; implemented expertise-based user prioritization ensuring **100%** regulatory compliance.

Software Developer — Eastern Enterprise *Feb '22 - Dec '24*

- Led a team of four to develop a customizable UI-driven architecture with built-in access checks for Microsoft APIs, enhancing security **by 75%** and automating processes for a multi-tenant solution.
- Redesigned database schemas to reduce complex queries and **boost performance by 30%.**
- Added client-side pagination to grids, **reducing data call size** and improving front-end client load times **by 70%.**
- Executed **30+ Angular UI screens**, streamlining onboarding and offboarding, **reducing enrollment time by 30%**, boosting client turnover **by 20%**.
- Built an observability data grid platform with real time monitoring features serving over **5000+ devices** to improve data visibility for users.
- Implemented server-side caching with MySQL Query Cache to **improve response times** and reduced redundant computations.

Software Engineering Intern — Eastern Enterprise *Aug '21 - Jan '22*

- Optimized backend for **3,000+** campsites by integrating six-language translation and a renewable QR code for seamless campsite card entry, improving booking and payment efficiency.
- Proposed and incorporated third-party login, making the login experience seamless by reducing login time **by 90%.**
- Architected and built a smart billing tool that dynamically calculates and applies discounts based on multiple factors, improving booking conversions **by 20%.**

PROJECTS

Evolutionary Optimization of CNN Architectures — Python, TensorFlow, DEAP

- Developed gradient-free CNN optimization using evolutionary algorithms on CIFAR-10 with hybrid tournament/lexicase selection; achieved **73.82%** accuracy through automated multi-objective optimization.
- Built evolutionary framework using DEAP with crossover, mutation, and elitism for automated CNN discovery; demonstrated competitive automated neural architecture design eliminating manual hyperparameter tuning through Pareto-optimal solution discovery.

Speech and Emotion Recognizer using Deep Learning and Librosa — Python, SQL, Librosa

- Built CNN-LSTM hybrid model using Librosa for real-time emotion detection across **10+** emotional states; achieved **93%** accuracy improvement through advanced feature extraction and neural network optimization.
- Deployed scalable emotion recognition system for institutional mental health assessment of **500+** college students; engineered end-to-end audio processing pipeline enabling automated psychological state monitoring and early intervention capabilities.

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Python, Java, MySQL, HTML, CSS, PowerShell, C++, React, PostgreSQL
Frameworks & Libraries: Angular, Tailwind, Karma Jasmine, Playwright, GraphQL, PyTorch, TensorFlow, Pandas, Plotly, Matplotlib, DEAP, Librosa, PuLP, Scikit-learn
Tools & Platforms: Azure, Docker, Jenkins, Jira, GitHub, Confluence, DevTools, IntelliJ, DevOps, CI/CD, Excel
AI/ML & Algorithms: Neural Architecture Search (NAS), Evolutionary Algorithms, CNN/LSTM, Multi-Objective Learning, Genetic Algorithms, Audio Processing, AutoML, MILP